

Congress of the United States
House of Representatives
Washington, DC 20515

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**EMBRYONIC STEM CELLS HAVE THE POTENTIAL TO HELP
AMERICANS WHO ARE SUFFERING FROM**
CARDIOVASCULAR DISEASE

Dear Colleague:

This is the fourth in a series of Dear Colleagues that we are sending to provide you and your staff with information about the promise of embryonic stem cell research. Scientists believe that 100 million Americans may one day be cured of or treated for their debilitating disease through discoveries and treatments from embryonic stem cell research.

Cardiovascular disease is the impaired ability to deliver oxygen to the heart cells due to the clogging of arteries. The results of this condition can be heart attacks, heart failure, heart valve disease and vascular disease. When the heart is damaged it can no longer circulate blood through the body at an acceptable level. The result may turn into partial paralysis or impaired brain function.

While much progress has been made in the field of cardiology through surgical and pharmaceutical treatments, researchers and patients continue to strive for better techniques and tools. There are a number of ways embryonic stem cell research may be able to help heart disease patients:

Basic Research -- A scientist published research last year that showed successful transplantation of embryonic stem cells into the heart of a healthy adult rat. Another researcher was able to transform stem cells into beating heart cells. Results like this show great promise for a similar use in human cardiac tissue and will improve understanding of these specialized cells.

Cell Therapy -- Medical researchers and heart disease advocates believe that embryonic stem cells will allow scientists to regenerate new heart tissue, heart valves and other cardiac structures. These customized tissues will have a smaller chance of rejection by the immune system and will improve quality of life for these patients.

To learn more about the promise of embryonic stem cell research or to cosponsor our legislation, H.R. 810, the "Stem Cell Research Enhancement Act," please contact Elizabeth Wenk with Rep. Castle (5-4165) or Meghan Taira with Rep. DeGette (5-4431) or visit our stem cell website at: <http://www.house.gov/castle/Castle%20DeGette%20ESCR.html>.



Michael Castle
Member of Congress

Sincerely,



Diana DeGette
Member of Congress